

WHAT IS CLAIMED IS:

1. A push knob for a guide wire, comprising:

a base member;

a boss means formed at a leading end of said base member;

a bore means formed in said boss means and in at least a part of said base member;

an internally threaded radial bore formed in said base member; and

a set screw that screw threadedly engages said radial bore and that bears against a guide wire received within said bore means when said set screw is advanced.

Sub B' 2. A method of dilating an arthroscopic incision, comprising the steps of:

inserting a stylet having an inner bore and an outer barrel through said incision and withdrawing said inner bore;

providing a first tube having a first predetermined length;

providing a second tube having a second predetermined length greater than said first predetermined length;

dimensioning said first tube to have an inner bore with a diameter greater than an outside diameter of said second tube so that said first tube telescopically receives said second tube;

tapering a distal end of said second tube so that said distal end is easily slid into a ligament without imparting trauma to the ligament;

telescopically inserting said second tube into the inner bore of said first tube to form a dilator means, said distal end of said second tube extending distally beyond a distal end of said first tube when said tubes are telescopically engaged;

inserting said dilator means through the barrel of said stylet;

dilating an incision a first amount by inserting the tapered distal end of the second tube through said incision;

dilating said incision further by inserting the distal end of the first tube therinto, said insertion being accomplished by sliding said first tube toward the incision over said second tube, said second tube serving to guide the first tube to the incision; and

withdrawing said second tube from the inner bore of said first tube and leaving said first tube in the incision so that subsequent arthroscopic surgical instruments may be introduced to a surgical site through the inner bore of said first tube.

Suba 3. A dilator tube, comprising:

an elongate tube;

a base member fixedly secured to a proximal end of said elongate tube;

a common bore means formed in said tube and said base member; and

a water port formed in said base member, said water port including a bore means formed therein in fluid communication with the bore means common to said tube and said base member;

whereby irrigation fluid may be introduced to a surgical site through said water port and said common bore, said tube thereby providing the dual functions of dilating an incision and simultaneously delivering irrigation fluid to said surgical site.

4. The dilator tube of claim 3, further comprising a recess means having a predetermined depth formed in a proximal end of said base member.

2/5. A dilator tube, comprising:

an elongate tube;

a base member fixedly secured to a proximal end of said tube;

a recess of predetermined depth formed in a distal end of said base member;

a boss means formed in said distal end of said base member, said boss means having a distal end extending distally beyond the distal end of said base member and said boss means having a proximal end integral with a bottom wall of said recess; and

said elongate tube having a tapered distal end to facilitate its insertion through an incision in the substantial absence of trauma to tissue.

3/6. A dilator means, comprising:

a first dilator tube of predetermined length;

a base member secured to a proximal end of said first dilator tube;

said first dilator tube and said base member having a common bore formed therein;

a water port formed in said base member, said water port having a bore formed therein in fluid communication with the bore common to said first dilator tube and said base member;

a recess of predetermined depth formed in a proximal end of said base member;

a second dilator tube having a predetermined length greater than the predetermined length of said first dilator tube;

said second dilator tube having an outside diameter less than said common bore so that said first dilator tube telescopically receives said second dilator tube;

a base member secured to a proximal end of said second dilator tube;

a recess of predetermined depth formed in a distal end of said second dilator tube base member;

a boss member extending from a bottom wall of said recess, said boss member extending distally beyond the distal end of said second dilator tube base member;

said boss member configured and dimensioned to be slidably received within the recess formed in the proximal end of the first dilator tube base member;

the proximal end of said first tube dilator base member being slidably received within the recess formed in the second dilator tube base member when said first dilator tube slidably receives said second dilator tube;

whereby a double lock is provided to lock the first dilator tube base member to the second dilator tube base

member, said first and second dilator tubes forming said dilator means when coupled together.

7. An arthroscopic ligament cutter including a tubular part having a sharp distal end, a knurled base member fixedly secured to a proximal end of said tubular part, a boss member secured to a distal end of said base member, and a common bore formed in said tubular part, said boss member, and said base member so that a guide wire is slidably received within said common bore to position and guide said ligament cutter.

8. A cervical osteotome, comprising an elongate solid rod having a longitudinal extent of about 105mm, a knurled base member having a longitudinal extent of about 20mm secured to a proximal end of said rod, and a chisel head formed in a distal end of said rod, said chisel head having a breadth of about 2.3mm, whereby said osteotome is slidably insertable into an arthroscopic sheath.

9. A cervical curet, comprising an elongate solid rod having a longitudinal extent of about 105mm, a knurled base member having a longitudinal extent of about 20mm secured to a proximal end of said rod, and a scoop member formed in a distal end of said rod, and said scoop member having a longitudinal extent of about 2.2mm, whereby said curet is slidably insertable into an arthroscopic sheath.

10. A nucleus extractor, comprising:

an elongate neck having an outside diameter of about 2.4mm;

a handle means secured to a proximal end of said neck, said handle means depending from said proximal end;

said handle means including a pair of pivotally mounted handle members;

a first bias means for urging said handle members to pivot away from one another;

a second bias means for urging said handle members to pivot toward one another;

said first and second bias means having substantially equal strengths so that each opposes the other with substantially equal force when the extractor is in repose; and

a shearing means disposed at a distal end of said neck, said shearing means being operated by manipulation of said handle members;

whereby said neck is slideably insertable into an arthroscopic sheath.

11. A curet nucleus extractor, comprising:

an elongate neck having a longitudinal extent of about 105mm and an outside diameter of about 2.4mm;

a handle means depending from a proximal end of said neck;

said handle means including a pair of pivotally mounted handle members;

a first bias means for urging said handle members to pivot away from one another;

a second bias means for urging said handle members to pivot toward one another;

said first and second bias means having substantially equal strengths so that each opposes the other with

substantially equal force when the extractor is in repose;
and

a scoop means disposed at a distal end of said neck,
said scoop means being operated by manipulation of said
handle members;

whereby said neck is slideably insertable into an
arthroscopic sheath.

12. A method for debulking a cervical tissue, comprising
the steps of:

making an arthroscopic incision;

inserting a stylet having an inner bore and an outer
barrel into said incision;

withdrawing said inner bore;

providing a first and a second dilator tube of
predetermined lengths, said second dilator tube having a
tapered end and having a length greater than said first
dilator tube;

telescopically inserting said second dilator tube into
said first dilator tube so that a distal end of said second
dilator tube extends beyond the distal end of said first
dilator tube, thereby forming a dilator means;

introducing said dilator means into said outer barrel of
said stylet;

introducing the tapered end of said second dilator tube
into cervical tissue, thereby dilating said cervical tissue;

then sliding the first dilator tube toward said tapered
distal end into said cervical tissue to further dilate said
incision;

withdrawing said second dilator tube from said first dilator tube after said first dilator tube has further dilated said incision;

and thereafter introducing arthroscopic tools through said first dilator tube.

13. A method for debulking a cervical tissue, comprising the steps of:

making an arthroscopic incision;

inserting a stylet having an inner bore and an outer barrel into said incision;

withdrawing said inner bore;

providing a plurality of dilator tubes of predetermined, successively shorter lengths and successively greater diameters so that a second dilator tube is shorter and has a greater diameter than a first dilator tube, a third dilator tube is shorter and has a greater diameter than said second dilator tube, and so on;

inserting a first dilator tube into said incision by sliding it over said stylet barrel;

withdrawing said stylet barrel from said incision;

telescopically inserting a second dilator tube over said first dilator tube to further dilate said incision;

telescopically inserting a third dilator tube over said second dilator tube to further dilate said incision, leaving said second dilator tube in position;

continuing to insert successive dilator tubes of decreasing lengths and increasing diameters until a desired dilation has been gradually achieved;

withdrawing from said incision all of said dilator tubes except the last-inserted dilator tube; and

introducing arthroscopic tools through the bore of said last-inserted dilator tube;

whereby arthroscopic surgery is performed by inserting said tools through said last-inserted dilator tube as needed.

14. A method for debulking a cervical tissue, comprising the steps of:

making an arthroscopic incision;

inserting a stylet having an inner bore and an outer barrel into said incision;

withdrawing said inner bore;

providing a plurality of dilator tubes of predetermined, successively shorter lengths and successively greater diameters so that a second dilator tube is shorter and has a greater diameter than a first dilator tube, a third dilator tube is shorter and has a greater diameter than said second dilator tube, and so on;

inserting a first dilator tube into said incision by sliding it over said stylet barrel;

withdrawing said stylet barrel from said incision;

telescopically inserting a second dilator tube over said first dilator tube to further dilate said incision;

withdrawing said first dilator tube after said second dilator tube has been inserted over it;

repeating said insertions and withdrawals with said progressively shorter and greater-in-diameter dilator tubes

until the incision has been gradually dilated to the desired extent; and

introducing arthroscopic tools through the bore of the last-inserted dilator tube after withdrawing the penultimate dilator tube from said last-inserted dilator tube;

whereby arthroscopic surgery is performed by inserting said tools through said last-inserted dilator tube as needed.

15. A method for removing a protruding tissue from abutting engagement with a nerve, comprising the steps of:

undermining tissue which protrudes into abutting engagement with a nerve by forming a cavity adjacent said tissue;

performing said undermining with predetermined arthroscopic tools;

employing progressively larger in diameter, shorter in length dilator tubes and progressively larger in diameter cutter tubes to enlarge the cavity;

dimensioning the cavity so that it has a volume adequate to fully receive therewithin the protruding tissue; and

inducing the collapse of the cavity by using a laser means to heat inner disc material of the cavity so that the protruding tissue falls into said cavity and out of engagement with said nerve.